Pat

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
25 FUNSTON ROAD
KANSAS CITY, KANSAS 66115

RECEIVED
SEP 24 1991
PRMT SECTION

SEP 20 1991

MEMORANDUM

SUBJECT: Transmittal of Analytical Data: Monsanto-Queeny Plant
St. Louis, Missouri (ADF43)

FROM: Robert B. Dona RBDona
Environmental Engineer, QADE/EDSB/ENSV

TO: Pat Nichols
Work Assignment Manager, PRMT/RCRA/WSTM

THRU: Jeffrey A. Wandtke
Regional QA Officer, ENSV

I am transmitting the attached Analysis Request Report for the RCRA groundwater sampling at the Monsanto-Queeny Plant, St. Louis, Missouri, by Steve Freeman of the Jacobs Engineering Group Inc. on June 4-7, 1991. This Analysis Request Report contains only the data from the groundwater samples collected as split samples with the facility's contractor and the field QC samples. The data from the analysis of the laboratory quality control are available at your request.

I am also including copies of the field sheets, the chain-of-custody record and ESAT case narratives and data reviews. If you have any questions, please call me at 551-5182.

Attachments

ANALYSIS REQUEST REPORT — VALIDATED DATA

FOR ACTIVITY: ADF43

DONA. B. — 09/18/91 17:19:19 — ALL REAL SAMPLES AND FIELD Q.C.

* FINAL REPORT

FY: 91 ACTIVITY: ADF43 DESCRIPTION: MONSANTO-QUEENY LOCATION: ST. LOUIS MISSOURI

STATUS: ACTIVE TYPE: SAMPLING - IN HOUSE ANALYSIS PROJECT: A60

LABO DUE DATE IS 7/10/91. REPORT DUE DATE IS 7/28/91.

INSPECTION DATE: 6/ 7/91 ALL SAMPLES RECEIVED DATE: 06/10/91

ALL DATA APPROVED BY LABO DATE: 09/10/91 FINAL REPORT TRANSMITTED DATE: 00/00/00

EXPECTED LABO TURNAROUND TIME IS 30 DAYS EXPECTED REPORT TURNAROUND TIME IS 51 DAYS

ACTUAL LABO TURNAROUND TIME IS 92 DAYS ACTUAL REPORT TURNAROUND TIME IS 0 DAYS

SAMP. NO.	QCC	M	DESCRIPTION	SAMPLE STATUS	# CONT.	CITY	STATE	AIRS/ STORET LOC NO	BEG. DATE	BEG. TIME	END. DATE	END. TIME
001		W	MONSANTO-QUEENY=MW-11	1	8	ST. LOUIS	MISSOURI		06/04/91	10:30	/ /	:
002		W	MONSANTO-QUEENY=TW-1	1	8	ST. LOUIS	MISSOURI		06/04/91	17:20	/ /	:
004		W	MONSANTO-QUEENY=QS-1	1	8	ST. LOUIS	MISSOURI		06/04/91	:	/ /	:
005		W	MONSANTO QUEENY-HW-1B	1	8	ST. LOUIS	MISSOURI		06/05/91	14:30	06/05/91	15:20
006		W	MONSANTO QUEENY-VW-2B	1	8	ST. LOUIS	MISSOURI		06/06/91	09.00	06/06/91	09.30
007		W	MONSANTO QUEENY-MW-8A	1	8	ST. LOUIS	MISSOURI		06/07/91	09:15	06/07/91	09:45
008	F	W	MONSANTO QUEENY-RINSATE BLANK	1	3	ST. LOUIS	MISSOURI		06/07/91	08:20	/ /	:
009	F	W	MONSANTO-QUEENY=FIELD BLANK	1	1	ST. LOUIS	MISSOURI		06/04/91	17:10	/ /	:

SAMP. NO. = SAMPLE IDENTIFICATION NUMBER
QCC = QUALITY CONTROL SAMPLE/AUDIT CODE
M = MEDIA OF SAMPLE (A=AIR, T=TISSUE, H=HAZARDOUS MATERIAL, S=SEDIMENT/SOIL, W=WATER)
AIRS/STORET LOC. NO. = A SAMPLING SITE LOCATION IDENTIFICATION NUMBER
BEG. DATE = THE DATE SAMPLING WAS STARTED
BEG. TIME = THE TIME SAMPLING WAS STARTED
END. DATE = THE DATE SAMPLING WAS ENDED
END. TIME = THE TIME SAMPLING WAS STOPPED
A = RESERVED
B = RESERVED
PES = PESTICIDES BY CONTRACT
= DIOXINS/FURANS BY EPA
E = EXPLOSIVES BY CONTRACT
FLD = FIELD MEASUREMENTS BY EPA
G = MINERALS & DISSOLVED MATERIALS BY EPA
HER = HERBICIDES BY EPA
I = ION CHROMATOGRAPHY ANALYSES BY EPA
MC = METALS BY CONTRACT
BNC = BASE NEUTRALS BY CONTRACT
L = FISH PHYSICAL DATA BY EPA
MET = METALS BY EPA
N = FISH TISSUE PARAMETERS BY EPA
VC = VOLATILES BY CONTRACT
P = PESTICIDES BY EPA
Q = FLASH POINT ANALYSES BY EPA
R = RESERVED
BN = SEMIVOLATILE BY EPA
T = CYANIDE PHENOL BY EPA
U = RESERVED
VOA = VOLATILE ORGANICS BY EPA
HC = HERBICIDES BY CONTRACT
X = RESERVED
Y = RESERVED
TRK = ACTIVITY TRACKING PARAMETERS BY EPA

STORET DETECTION IDENTIFIERS
BLANK = NO REMARKS
J = DATA REPORTED BUT NOT VALID BY APPROVED QC PROCEDURES
I = INVALID SAMPLE/DATA - VALUE NOT REPORTED
U = LESS THAN (MEASUREMENT DETECTION LIMIT)
M = DETECTED BUT BELOW THE LEVEL FOR ACCURATE QUANTIFICATION
O = PARAMETER NOT ANALYZED

CONTRACTOR/ IN HOUSE / FIELD MEDIA GROUPS
FIELD = * * * = AF,HF,SF,TF,WF,ZZ
CONTRACTOR = * = HA,HC,HJ,HK,HO,SC,SJ,SK,SO,SW,TC,TJ, TK,TO,TW,WA,WC,WE,WJ,WK,WO,WW
IN HOUSE = * = ALL OTHERS

QUALITY CONTROL AUDIT CODES
A = TRUE VALUE FOR CALIBRATION STANDARD
B = CONCENTRATION RESULTING FROM DUPLICATE LAB SPIKE
C = MEASURED VALUE FOR CALIBRATION STANDARD
D = MEASURED VALUE FOR FIELD DUPLICATE
F = MEASURED VALUE FOR FIELD BLANK
G = MEASURED VALUE FOR METHOD STANDARD
H = TRUE VALUE FOR METHOD STANDARD
K = CONCENTRATION RESULTING FROM DUPLICATE FIELD SPIKE
L = MEASURED VALUE FOR LAB DUPLICATE
M = MEASURED VALUE FOR LAB BLANK
N = MEASURED VALUE FOR DUPLICATE FIELD SPIKE
P = MEASURED VALUE FOR PERFORMANCE STANDARD
R = CONCENTRATION RESULTING FROM LAB SPIKE
S = MEASURED VALUE FOR LAB SPIKE
T = TRUE VALUE OF PERFORMANCE STANDARD
W = MEASURED VALUE FOR DUPLICATE LAB SPIKE
Y = MEASURED VALUE FOR FIELD SPIKE
Z = CONCENTRATION RESULTING FROM FIELD SPIKE

MEDIA CODES
A = AIR
T = BIOLOGICAL (PLANT & ANIMAL) TISSUE
H = HAZARDOUS MATERIALS/MAN MADE PRODUCTS
S = SEDIMENT, SLUDGE & SOIL
W = WATER

UNITS
NA = NOT APPLICABLE
PG = PICOGRAMS (1 X 10-12 GRAMS)
NG = NANOGRAMS (1 X 10-9 GRAMS)
UG = MICROGRAMS (1 X 10-6 GRAMS)
MG = MILLIGRAMS (1 X 10-3 GRAMS)
M3 = METER CUBED
MPH = MILES PER HOUR
SCM = STANDARD (1 ATM, 25 C) CUBIC METER
KG = KILOGRAM
L = LITER
C = CENTIGRADE DEGREES
SU = STANDARD (PH) UNITS
# = NUMBER
LB = POUNDS
IN = INCHES
M/F = MALE/FEMALE
M2 = SQUARE METER
I.D. = SPECIES IDENTIFICATION
GPM = GALLONS PER MINUTE
CFS = CUBIC FEET PER SECOND
MGD = MILLION GALLONS PER DAY
1000G= FLOW, 1000 GALLONS PER COMPOSITE
UMHOS= CONDUCTIVITY UNITS (1/OHMS)
NTU = TURBIDITY UNITS
PC/L = PICO (1 X 10-12) CURRIES PER LITER
MV = MILLIVOLT
SQ FT= SQUARE FEET
P/CM2= PICOGRAMS PER SQ. CENTIMETER
U/CM2= MICROGRAMS PER SQ. CENTIMETER

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	001		002		004		005		006	
WD02 2,3,7,8-TCDD IN WATER (PG/ML)	PG/ML	0.000174	U	0.00035	U	0.000176	U	0.00057	U	0.00047	U
WF01 WATER TEMP	'C	76.0		75.8		67.01		68.7		65.5	
WF05 PH, FIELD	SU	6.93		6.75		8.06		7.88		6.33	
WF10 CONDUCTIVITY (FIELD)	UMHOS	1210		2550		3730		1953		776	
WH01 2,4-D	UG/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
WH02 2,4,5-TP (SILVEX)	UG/L	0.2	U	0.2	U	11	U	0.2	U	0.2	U
WH03 2,4,5-T	UG/L	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
WM01 SILVER BY ICAP	UG/L	10	U	10	U	10	U	10	U	10	U
WM02 ALUMINUM, TOTAL, BY ICAP	UG/L	681		258		5990		4990		5850	
WM03 ARSENIC, TOTAL, BY ICAP	UG/L	50	U	50	U	50	U	50	U	50	U
WM04 BARIUM, TOTAL, BY ICAP	UG/L	285		266		2030		219		175	
WM05 BERYLLIUM, TOTAL, BY ICAP	UG/L	2	U	2	U	2	U	2	U	2	U
WM06 CADMIUM, TOTAL, BY ICAP	UG/L	5	U	5	U	5	U	5	U	5	U
WM07 COBALT, TOTAL, BY ICAP	UG/L	10	U	10	U	10	U	10	U	10	U
WM08 CHROMIUM, TOTAL, BY ICAP	UG/L	10	U	10	U	14.6		18.2		10	U
WM09 COPPER, TOTAL, BY ICAP	UG/L	10	U	10	U	34.2		21.5		17.9	
WM10 IRON BY ICAP	UG/L	10200		31300		17000		9300		27900	
WM11 MANGANESE BY ICAP	UG/L	385		2280		449		371		1500	
WM12 MOLYBDENUM BY ICAP	UG/L	NA	O	NA	O	NA	O	NA	O	NA	O
WM13 NICKEL BY ICAP	UG/L	20	U	20	U	20	U	21.8		20	U
WM14 LEAD BY ICAP	UG/L	50	U	50	U	90		50	U	50	U
WM15 ANTIMONY, TOTAL, BY ICAP	UG/L	50	U	50	U	50	U	50	U	50	U
WM16 SELENIUM BY ICAP	UG/L	54.7		64.3		50	U	50	U	50	U
WM17 TITANIUM BY ICAP	UG/L	NA	O	NA	O	NA	O	NA	O	NA	O
WM18 THALLIUM BY ICAP	UG/L	300	U	300	U	300	U	300	U	300	U
WM19 VANADIUM BY ICAP	UG/L	10	U	10	U	19.1		15.1		15.4	

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	001		002		004		005		006	
WM20 ZINC BY ICAP	UG/L	37.2		122		153		89		42.9	
WM21 CALCIUM, TOTAL BY ICAP	MG/L	179		262		59.4		52.1		191	
WM22 MAGNESIUM, TOTAL BY ICAP	MG/L	14.7		63.8		20		6.99		40.7	
WM23 SODIUM, TOTAL BY ICAP	MG/L	33.5		172		565		149		76.1	
WM24 POTASSIUM, TOTAL BY ICAP	MG/L	5.83		36.2		63.8		343		23.5	
WM34 MERCURY BY COLD VAPOR AA	UG/L	0.2	U	0.218		0.598		0.2	U	0.2	U
WP01 BHC, ALPHA, BY GC/EC	UG/L	5.0	U	0.05	U	0.050	U	0.050	U	0.050	U
WP02 BHC, BETA, BY GC/EC	UG/L	5.0	U	0.05	U	0.050	U	0.050	U	0.050	U
WP03 BHC, DELTA	UG/L	5.0	U	0.05	U	0.050	U	0.050	U	0.050	U
WP04 GAMMA-BHC(LINDANE),BY GC/EC	UG/L	5.0	U	0.05	U	0.050	U	0.050	U	0.050	U
WP05 ALDRIN, BY GC/EC	UG/L	5.0	U	0.05	U	0.050	U	0.050	U	0.050	U
WP06 DIELDRIN, BY GC/EC	UG/L	10	U	0.10	U	0.10	U	0.10	U	0.10	U
WP07 ENDOSULFAN I, BY GC/EC	UG/L	5.0	U	0.05	U	0.050	U	0.050	U	0.050	U
WP08 ENDOSULFAN II, BY GC/EC	UG/L	10	U	0.10	U	0.10	U	0.10	U	0.10	U
WP09 ENDOSULFAN SULFATE, BY GC/EC	UG/L	10	U	0.10	U	0.10	U	0.10	U	0.10	U
WP10 ENDRIN, BY GC/EC	UG/L	10	U	0.10	U	0.10	U	0.10	U	0.10	U
WP11 ENDRIN ALDEHYDE, BY GC/EC	UG/L	NA	O	NA	O	NA	O	NA	O	NA	O
WP13 4,4'-DDE	UG/L	10	U	0.10	U	0.10	U	0.10	U	0.10	U
WP14 4,4'-DDD	UG/L	10	U	0.10	U	0.10	U	0.10	U	0.10	U
WP15 4,4'-DDT	UG/L	10	U	0.10	U	0.10	U	0.10	U	0.10	U
WP16 TOXAPHENE	UG/L	100	U	1.0	U	1.0	U	1.0	U	1.0	U
WP17 PCB-1016	UG/L	50	U	0.50	U	0.50	U	0.50	U	0.50	U
WP18 PCB-1221	UG/L	50	U	0.50	U	0.50	U	0.50	U	0.50	U
WP19 PCB-1232	UG/L	50	U	0.50	U	0.50	U	0.50	U	0.50	U
WP20 PCB-1242	UG/L	50	U	0.50	U	0.50	U	0.50	U	0.50	U
WP21 PCB-1248	UG/L	50	U	0.50	U	0.50	U	0.50	U	0.50	U

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	001		002		004		005		006	
WP22 PCB-1254	UG/L	100	U	1.0	U	1.0	U	1.0	U	1.0	U
WP23 PCB-1260	UG/L	100	U	1.0	U	1.0	U	1.0	U	1.0	U
WP24 CHLORDANE, TECHNICAL, BY GC/EC	UG/L	NA	O	NA	O	NA	O	NA	O	NA	O
WP25 HEPTACHLOR,BY GC/EC	UG/L	5.0	U	0.050	U	0.050	U	0.050	U	0.050	U
WP26 HEPTACHLOR EPOXIDE,BY GC/EC	UG/L	5.0	U	0.050	U	0.050	U	0.050	U	0.050	U
WS01 PHENOL	UG/L	100	U	10	U	10	U	10	U	10	U
WS03 ETHER, BIS(2-CHLOROETHYL), BY GC/MS	UG/L	100	U	190		10	U	10	U	10	U
WS04 2-CHLOROPHENOL	UG/L	100	U	10	U	10	U	10	U	10	U
WS05 1,3-DICHLOROBENZENE	UG/L	100	U	10	U	10	U	10	U	10	U
WS06 1,4-DICHLOROBENZENE	UG/L	100	U	10	U	10	U	10	U	10	U
WS07 BENZYL ALCOHOL	UG/L	100	U	10	U	10	U	10	U	10	U
WS08 1,2-DICHLOROBENZENE	UG/L	100	U	18		10	U	10	U	10	U
WS09 2-METHYLPHENOL (O-CRESOL)	UG/L	100	U	10	U	10	U	10	U	10	U
WS10 ETHER, BIS(2-CHLOROISOPROPYL), BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS11 4-METHYLPHENOL (P-CRESOL)	UG/L	100	U	10	U	10	U	10	U	10	U
WS12 N-NITROSO-DIPROPYLAMINE	UG/L	100	U	10	U	10	U	10	U	10	U
WS13 HEXACHLOROETHANE	UG/L	100	U	10	U	10	U	10	U	10	U
WS14 NITROBENZENE	UG/L	100	U	10	U	10	U	10	U	10	U
WS15 ISOPHORONE	UG/L	100	U	10	U	10	U	10	U	10	U
WS16 2-NITROPHENOL	UG/L	100	U	10	U	10	U	10	U	10	U
WS17 2,4-DIMETHYLPHENOL	UG/L	100	U	10	U	10	U	10	U	10	U
WS18 BENZOIC ACID, BY GC/MS	UG/L	500	U	50	U	50	U	50	U	50	U
WS19 METHANE, BIS(2-CHLOROETHYOXY), BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS20 2,4-DICHLOROPHENOL	UG/L	100	U	10	U	10	U	10	U	10	U
WS21 1,2,4-TRICHLOROBENZENE	UG/L	100	U	10	U	10	U	10	U	10	U
WS22 NAPHTHALENE	UG/L	100	U	10	U	10	U	10	U	10	U

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	001		002		004		005		006	
WS23 4-CHLOROANILINE	UG/L	100	U	10	U	10	U	10	U	10	U
WS24 HEXACHLOROBUTADIENE,BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS25 4-CHLORO-3-METHYLPHENOL	UG/L	100	U	10	U	10	U	10	U	10	U
WS26 2-METHYLNAPHTHALENE	UG/L	100	U	10	U	10	U	10		10	U
WS27 HEXACHLOROCYCLOPENTADIENE,BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS28 2,4,6-TRICHLOROPHENOL	UG/L	100	U	10	U	10	U	10	U	50	U
WS29 2,4,5-TRICHLOROPHENOL	UG/L	500	U	50	U	50	U	50	U	10	U
WS30 2-CHLORONAPHTHALENE	UG/L	100	U	10	U	10	U	10	U	50	U
WS31 2-NITROANILINE (ORTHO NITROANILINE)	UG/L	500	U	50	U	50	U	50	U	10	U
WS32 PHTHALATE, DIMETHYL, BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS33 ACENAPHTHYLENE, BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS34 3-NITROANILINE	UG/L	500	U	50	U	50	U	50	U	50	U
WS35 ACENAPHTHENE, BY GC/MS	UG/L	100	U	10	U	10		10	U	10	U
WS36 2,4-DINITROPHENOL	UG/L	500	U	50	U	50	U	50	U	50	U
WS37 4-NITROPHENOL	UG/L	500	U	50	U	50	U	50	U	50	U
WS38 DIBENZOFURAN	UG/L	100	U	10	U	10	U	10	U	10	U
WS39 2,4-DINITROTOLUENE	UG/L	100	U	10	U	10	U	10	U	10	U
WS40 2,6-DINITROTOLUENE	UG/L	100	U	10	U	10	U	10	U	10	U
WS41 PHTHALATE, DIETHYL, BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS42 4-CHLOROPHENYL PHENYL ETHER	UG/L	100	U	10	U	10	U	10	U	10	U
WS43 FLUORENE,BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS44 4-NITROANILINE	UG/L	500	U	NA	I	NA	I	NA	I	NA	I
WS45 4,6-DINITRO-2-METHYLPHENOL	UG/L	500	U	50	U	50	U	50	U	50	U
WS46 N-NITROSODIPHENYLAMINE	UG/L	100	U	10	U	10	U	10	U	10	U
WS47 4-BROMOPHENYL PHENYL ETHER	UG/L	100	U	10	U	10	U	10	U	10	U
WS48 HEXACHLOROBENZENE,BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	001		002		004		005		006	
WV10 1,2-DICHLOROETHENE, TOTAL	UG/L	50.	U	50.		5.0	U	440.		1900.	
WV11 CHLOROFORM, BY GC/MS	UG/L	50.	U	5.0	U	5.0	U	5.0	U	5.0	U
WV12 1,2-DICHLOROETHANE	UG/L	50.	U	5.0	U	5.0	U	5.0	U	5.0	U
WV13 1,1,1-TRICHLOROETHANE	UG/L	50.	U	5.0	U	5.0	U	6.2		5.0	U
WV14 CARBON TETRACHLORIDE, BY GC/MS	UG/L	50.	U	5.0	U	5.0	U	5.0	U	5.0	U
WV15 BROMODICHLOROMETHANE, BY GC/MS	UG/L	50.	U	5.0U		5.0	U	5.0	U	5.0	U
WV16 1,2-DICHLOROPROPANE	UG/L	50.	U	5.0U		5.0	U	5.0	U	5.0	U
WV17 BENZENE, BY GC/MS	UG/L	50.	U	60.		5.0	U	5.0	U	5.0	U
WV19 TRICHLOROETHENE	UG/L	50.	U	5.0U		5.0	U	1200.		5.0	U
WV20 DICHLOROPROPENE, CIS-1,3-, BY GC/MS	UG/L	50.	U	5.0U		5.0	U	5.0	U	5.0	U
WV21 DIBROMOCHLOROMETHANE, BY GC/MS	UG/L	50.	U	5.0U		5.0	U	5.0	U	5.0	U
WV22 1,1,2-TRICHLOROETHANE	UG/L	50.	U	5.0U		5.0	U	5.0	U	5.0	U
WV24 BROMOFORM, BY GC/MS	UG/L	50.	U	5.0U		5.0	U	5.0	U	5.0	U
WV25 TETRACHLOROETHENE	UG/L	50.	U	5.0U		5.0	U	5.0	U	5.0	U
WV26 TOLUENE	UG/L	50.	U	5.0U		5.0	U	5.0	U	5.0	U
WV27 1,1,2,2-TETRACHLOROETHANE	UG/L	50.	U	5.0U		5.0	U	5.0	U	5.0	U
WV28 CHLOROBENZENE, BY GC/MS	UG/L	66000.		35.		6.1		5.0	U	5.0	U
WV29 ETHYL BENZENE,BY GC/MS	UG/L	50.	U	5.0U		5.0	U	5.0	U	5.0	U
WV30 ACETONE, BY GC/MS	UG/L	100.	U	10.U		10.	U	10.	U	10.	U
WV31 CARBON DISULFIDE, BY GC/MS	UG/L	50.	U	5.0U		5.0	U	5.0	U	5.0	U
WV32 2-BUTANONE	UG/L	990.		10.U		10.U		10.U		10.U	
WV33 VINYL ACETATE	UG/L	100.	U	10.U		10.U		10.U		10.U	
WV34 2-HEXANONE	UG/L	100.	U	10.U		10.U		10.U		10.U	
WV35 4-METHYL-2-PENTANONE	UG/L	100.	U	10.U		10.U		10.U		10.U	
WV36 STYRENE	UG/L	50.	U	5.0U		5.0U		5.0U		5.0U	
WV37 XYLENES, TOTAL	UG/L	50.	U	5.0U		5.0U		5.0U		5.0U	

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	001		002		004		005		006	
WS49 PENTACHLOROPHENOL	UG/L	500	U	50	U	50	U	50	U	50	U
WS50 PHENANTHRENE	UG/L	100	U	10	U	20		10	U	10	U
WS51 ANTHRACENE, BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS52 PHTHALATE, DI-N-BUTYL-, BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS53 FLUORANTHENE.BY GC/MS	UG/L	100	U	10	U	10		10	U	10	U
WS54 PYRENE	UG/L	100	U	10	U	10	U	10	U	10	U
WS55 PHTHALATE, BUTYL BENZYL	UG/L	100	U	10	U	10	U	10	U	10	U
WS56 3,3'-DICHLOROBENZIDINE	UG/L	200	U	20	U	20	U	20	U	20	U
WS57 ANTHRACENE, BENZO(A), BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS58 PHTHALATE, BIS(2-ETHYLHEXYL), BY GC/MS	UG/L	100	U	14	U	16	U	10	U	21	U
WS59 CHRYSENE, BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS60 PHTHALATE, DI-N-OCTYL-, BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS61 FLUORANTHENE, BENZO(B), BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS62 FLUORANTHENE, BENZSO(K), BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS63 PYRENE, BENZO(A), BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS64 INDENO(1,2,3-CD)PYRENE	UG/L	100	U	10	U	10	U	10	U	10	U
WS65 ANTHRACENE, DIBENZO(A,H), BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS66 PERYLENE, BENZO(G,H,I), BY GC/MS	UG/L	100	U	10	U	10	U	10	U	10	U
WS67 CARBAZOLE	UG/L	NA	O	NA	O	NA	O	NA	O	NA	O
WV03 CHLOROMETHANE, BY GC/MS	UG/L	100.	U	10.	U	10.	U	10.	U	10.	U
WV04 BROMOMETHANE, BY GC/MS	UG/L	200.	U	20.	U	20.	U	20.	U	20.	U
WV05 VINYL CHLORIDE	UG/L	150.	U	310.		15.	U	15.	U	15.	U
WV06 CHLOROETHANE, BY GC/MS	UG/L	150.	U	15.	U	15.	U	15.	U	15.	U
WV07 METHYLENE CHLORIDE	UG/L	30.	J	10.	U	10.	U	10.	U	10.	U
WV08 1,1-DICHLOROETHENE	UG/L	50.	U	5.0	U	5.0	U	5.0	U	5.0	U
WV09 1,1-DICHLOROETHANE	UG/L	50.	U	5.0	U	5.0	U	5.1		5.0	U

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	001	002	004	005	006
WV40 TRANS-1,3-DICHLOROPROPENE	UG/L	50. U	5.0U	5.0U	5.0U	5.0U
ZZ01 SAMPLE NUMBER	NA	001	002	004	005	006
ZZ02 ACTIVITY CODE	NA	ADF43	ADF43	ADF43	ADF43	ADF43

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	007		008F		009F		
WD02 2,3,7,8-TCDD IN WATER (PG/ML)	PG/ML	0.000148	U					
WF01 WATER TEMP	'C	70.8						
WF05 PH, FIELD	SU	5.75						
WF10 CONDUCTIVITY (FIELD)	UMHOS	4150						
WH01 2,4-D	UG/L	0.2	U					
WH02 2,4,5-TP (SILVEX)	UG/L	0.2	U					
WH03 2,4,5-T	UG/L	0.2	U					
WM01 SILVER BY ICAP	UG/L	10	U	10	U			
WM02 ALUMINUM, TOTAL, BY ICAP	UG/L	886		75.8				
WM03 ARSENIC, TOTAL, BY ICAP	UG/L	50	U	50	U			
WM04 BARIUM, TOTAL, BY ICAP	UG/L	886		9.65				
WM05 BERYLLIUM, TOTAL, BY ICAP	UG/L	2	U	2	U			
WM06 CADMIUM, TOTAL, BY ICAP	UG/L	5	U	5	U			
WM07 COBALT, TOTAL, BY ICAP	UG/L	10	U	10	U			
WM08 CHROMIUM, TOTAL, BY ICAP	UG/L	12.6		10	U			
WM09 COPPER, TOTAL, BY ICAP	UG/L	10	U	10	U			
WM10 IRON BY ICAP	UG/L	29300		50	U			
WM11 MANGANESE BY ICAP	UG/L	2860		2	U			
WM12 MOLYBDENUM BY ICAP	UG/L	NA	O	NA	O			
WM13 NICKEL BY ICAP	UG/L	20	U	20	U			
WM14 LEAD BY ICAP	UG/L	50	U	50	U			
WM15 ANTIMONY, TOTAL, BY ICAP	UG/L	50	U	50	U			
WM16 SELENIUM BY ICAP	UG/L	50	U	50	U			
WM17 TITANIUM BY ICAP	UG/L	NA	O	NA	O			
WM18 THALLIUM BY ICAP	UG/L	300	U	300	U			
WM19 VANADIUM BY ICAP	UG/L	10	U	10	U			

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	007		008F		009F		
WM20 ZINC BY ICAP	UG/L	25.9		20	U			
WM21 CALCIUM, TOTAL BY ICAP	MG/L	326		2	U			
WM22 MAGNESIUM, TOTAL BY ICAP	MG/L	76.1		2	U			
WM23 SODIUM, TOTAL BY ICAP	MG/L	476		2	U			
WM24 POTASSIUM, TOTAL BY ICAP	MG/L	26.7		2	U			
WM34 MERCURY BY COLD VAPOR AA	UG/L	0.483		0.2	U			
WP01 BHC, ALPHA, BY GC/EC	UG/L	0.050	U					
WP02 BHC, BETA, BY GC/EC	UG/L	0.050	U					
WP03 BHC, DELTA	UG/L	0.050	U					
WP04 GAMMA-BHC(LINDANE),BY GC/EC	UG/L	0.050	U					
WP05 ALDRIN, BY GC/EC	UG/L	0.050	U					
WP06 DIELDRIN, BY GC/EC	UG/L	0.10	U					
WP07 ENDOSULFAN I, BY GC/EC	UG/L	0.050	U					
WP08 ENDOSULFAN II, BY GC/EC	UG/L	0.10	U					
WP09 ENDOSULFAN SULFATE, BY GC/EC	UG/L	0.10	U					
WP10 ENDRIN, BY GC/EC	UG/L	0.10	U					
WP11 ENDRIN ALDEHYDE, BY GC/EC	UG/L	NA	O					
WP13 4,4'-DDE	UG/L	0.10	U					
WP14 4,4'-DDD	UG/L	0.10	U					
WP15 4,4'-DDT	UG/L	0.10	U					
WP16 TOXAPHENE	UG/L	1.0	U					
WP17 PCB-1016	UG/L	0.50	U					
WP18 PCB-1221	UG/L	0.50	U					
WP19 PCB-1232	UG/L	0.50	U					
WP20 PCB-1242	UG/L	0.50	U					
WP21 PCB-1248	UG/L	0.50	U					

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	007		008F		009F	
WP22 PCB-1254	UG/L	1.0	U				
WP23 PCB-1260	UG/L	1.0	U				
WP24 CHLORDANE, TECHNICAL, BY GC/EC	UG/L	NA	O				
WP25 HEPTACHLOR,BY GC/EC	UG/L	0.050	U				
WP26 HEPTACHLOR EPOXIDE,BY GC/EC	UG/L	0.050	U				
WS01 PHENOL	UG/L	10	U				
WS03 ETHER, BIS(2-CHLOROETHYL), BY GC/MS	UG/L	10	U				
WS04 2-CHLOROPHENOL	UG/L	10	U				
WS05 1,3-DICHLOROBENZENE	UG/L	18					
WS06 1,4-DICHLOROBENZENE	UG/L	10	U				
WS07 BENZYL ALCOHOL	UG/L	10	U				
WS08 1,2-DICHLOROBENZENE	UG/L	15					
WS09 2-METHYLPHENOL (O-CRESOL)	UG/L	10	U				
WS10 ETHER, BIS(2-CHLOROISOPROPYL), BY GC/MS	UG/L	10	U				
WS11 4-METHYLPHENOL (P-CRESOL)	UG/L	10	U				
WS12 N-NITROSO-DIPROPYLAMINE	UG/L	10	U				
WS13 HEXACHLOROETHANE	UG/L	10	U				
WS14 NITROBENZENE	UG/L	10	U				
WS15 ISOPHORONE	UG/L	10	U				
WS16 2-NITROPHENOL	UG/L	10	U				
WS17 2,4-DIMETHYLPHENOL	UG/L	10	U				
WS18 BENZOIC ACID, BY GC/MS	UG/L	50	U				
WS19 METHANE, BIS(2-CHLOROETHYOXY), BY GC/MS	UG/L	10	U				
WS20 2,4-DICHLOROPHENOL	UG/L	10	U				
WS21 1,2,4-TRICHLOROBENZENE	UG/L	10	U				
WS22 NAPHTHALENE	UG/L	10	U				

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	007		008F		009F	
WS23 4-CHLOROANILINE	UG/L	54					
WS24 HEXACHLOROBUTADIENE,BY GC/MS	UG/L	10	U				
WS25 4-CHLORO-3-METHYLPHENOL	UG/L	10	U				
WS26 2-METHYLNAPHTHALENE	UG/L	10	U				
WS27 HEXACHLOROCYCLOPENTADIENE,BY GC/MS	UG/L	10	U				
WS28 2,4,6-TRICHLOROPHENOL	UG/L	10	U				
WS29 2,4,5-TRICHLOROPHENOL	UG/L	50	U				
WS30 2-CHLORONAPHTHALENE	UG/L	10	U				
WS31 2-NITROANILINE (ORTHO NITROANILINE)	UG/L	50	U				
WS32 PHTHALATE, DIMETHYL, BY GC/MS	UG/L	10	U				
WS33 ACENAPHTHYLENE, BY GC/MS	UG/L	10	U				
WS34 3-NITROANILINE	UG/L	50	U				
WS35 ACENAPHTHENE, BY GC/MS	UG/L	10	U				
WS36 2,4-DINITROPHENOL	UG/L	50	U				
WS37 4-NITROPHENOL	UG/L	50	U				
WS38 DIBENZOFURAN	UG/L	10	U				
WS39 2,4-DINITROTOLUENE	UG/L	10	U				
WS40 2,6-DINITROTOLUENE	UG/L	10	U				
WS41 PHTHALATE, DIETHYL, BY GC/MS	UG/L	10	U				
WS42 4-CHLOROPHENYL PHENYL ETHER	UG/L	10	U				
WS43 FLUORENE,BY GC/MS	UG/L	10	U				
WS44 4-NITROANILINE	UG/L	NA	I				
WS45 4,6-DINITRO-2-METHYLPHENOL	UG/L	50	U				
WS46 N-NITROSODIPHENYLAMINE	UG/L	10	U				
WS47 4-BROMOPHENYL PHENYL ETHER	UG/L	10	U				
WS48 HEXACHLOROBENZENE,BY GC/MS	UG/L	10	U				

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	007		008F		009F			
WS49 PENTACHLOROPHENOL	UG/L	50	U						
WS50 PHENANTHRENE	UG/L	10	U						
WS51 ANTHRACENE, BY GC/MS	UG/L	10	U						
WS52 PHTHALATE, DI-N-BUTYL-, BY GC/MS	UG/L	10	U						
WS53 FLUORANTHENE,BY GC/MS	UG/L	10	U						
WS54 PYRENE	UG/L	10	U						
WS55 PHTHALATE, BUTYL BENZYL	UG/L	10	U						
WS56 3,3'-DICHLOROBENZIDINE	UG/L	20	U						
WS57 ANTHRACENE, BENZO(A), BY GC/MS	UG/L	10	U						
WS58 PHTHALATE, BIS(2-ETHYLHEXYL), BY GC/MS	UG/L	19	U						
WS59 CHRYSENE, BY GC/MS	UG/L	10	U						
WS60 PHTHALATE, DI-N-OCTYL-, BY GC/MS	UG/L	10	U						
WS61 FLUORANTHENE, BENZO(B), BY GC/MS	UG/L	10	U						
WS62 FLUORANTHENE, BENZSO(K), BY GC/MS	UG/L	10	U						
WS63 PYRENE, BENZO(A), BY GC/MS	UG/L	10	U						
WS64 INDENO(1,2,3-CD)PYRENE	UG/L	10	U						
WS65 ANTHRACENE, DIBENZO(A,H), BY GC/MS	UG/L	10	U						
WS66 PERYLENE, BENZO(G,H,I), BY GC/MS	UG/L	10	U						
WS67 CARBAZOLE	UG/L	NA	O						
WV03 CHLOROMETHANE, BY GC/MS	UG/L	10.	U	10.	U	10.U			
WV04 BROMOMETHANE, BY GC/MS	UG/L	20.	U	20.	U	20.U			
WV05 VINYL CHLORIDE	UG/L	180.		15.	U	15.U			
WV06 CHLOROETHANE, BY GC/MS	UG/L	15.	U	15.	U	15.U			
WV07 METHYLENE CHLORIDE	UG/L	10.	U	10.	U	10.U			
WV08 1,1-DICHLOROETHENE	UG/L	5.0	U	5.0	U	5.0U			
WV09 1,1-DICHLOROETHANE	UG/L	5.0	U	5.0	U	5.0U			

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	007		008F		009F		
WV10 1,2-DICHLOROETHENE, TOTAL	UG/L	500.		5.0	U	5.0U		
WV11 CHLOROFORM, BY GC/MS	UG/L	5.0	U	5.0	U	5.0U		
WV12 1,2-DICHLOROETHANE	UG/L	5.0	U	5.0	U	5.0U		
WV13 1,1,1-TRICHLOROETHANE	UG/L	5.0	U	5.0	U	5.0U		
WV14 CARBON TETRACHLORIDE, BY GC/MS	UG/L	5.0	U	5.0	U	5.0U		
WV15 BROMODICHLOROMETHANE, BY GC/MS	UG/L	5.0	U	5.0	U	5.0U		
WV16 1,2-DICHLOROPROPANE	UG/L	5.0	U	5.0	U	5.0U		
WV17 BENZENE, BY GC/MS	UG/L	130.		5.0	U	5.0U		
WV19 TRICHLOROETHENE	UG/L	5.0	U	5.0	U	5.0U		
WV20 DICHLOROPROPENE, CIS-1.3-, BY GC/MS	UG/L	5.0	U	5.0	U	5.0U		
WV21 DIBROMOCHLOROMETHANE, BY GC/MS	UG/L	5.0	U	5.0	U	5.0U		
WV22 1,1,2-TRICHLOROETHANE	UG/L	5.0	U	5.0	U	5.0U		
WV24 BROMOFORM, BY GC/MS	UG/L	5.0	U	5.0	U	5.0U		
WV25 TETRACHLOROETHENE	UG/L	5.0	U	5.0	U	5.0U		
WV26 TOLUENE	UG/L	15.	J	5.0	U	5.0U		
WV27 1,1,2,2-TETRACHLOROETHANE	UG/L	5.0	U	5.0	U	5.0U		
WV28 CHLOROBENZENE, BY GC/MS	UG/L	22000.	J	5.0	U	5.0U		
WV29 ETHYL BENZENE,BY GC/MS	UG/L	18.	J	5.0	U	5.0U		
WV30 ACETONE, BY GC/MS	UG/L	10.	U	10.	U	10.U		
WV31 CARBON DISULFIDE, BY GC/MS	UG/L	5.0	U	5.0	U	5.0U		
WV32 2-BUTANONE	UG/L	10.U		10.	U	10.U		
WV33 VINYL ACETATE	UG/L	10.U		10.	U	10.U		
WV34 2-HEXANONE	UG/L	10.U		10.	U	10.U		
WV35 4-METHYL-2-PENTANONE	UG/L	10.U		10.	U	10.U		
WV36 STYRENE	UG/L	5.0U		5.0	U	5.0U		
WV37 XYLENES, TOTAL	UG/L	9.2J		5.0	U	5.0U		

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 1-ADF43 VALIDATED DATA

COMPOUND	UNITS	007	008F		009F		
WV40 TRANS-1,3-DICHLOROPROPENE	UG/L	5.0U	5.0	U	5.0U		
ZZ01 SAMPLE NUMBER	NA	007	008		009		
ZZ02 ACTIVITY CODE	NA	ADF43	ADF43		ADF43		

ACTIVITY ADF43 MONSANTO-QUEENY

THE PROJECT LEADER SHOULD CIRCLE ONE - STORET. AIRS, OR ARCHIVE.

CIRCLE ONE: STORET AIRS ARCHIVE

FINAL DATA REPORT APPROVED BY PROJECT LEADER ON 09/18/91 17:19:19 BY Robert B Dorn.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
25 FUNSTON ROAD
KANSAS CITY, KANSAS 66115

DATE: SEP 10 1991

MEMORANDUM

SUBJECT: Data Transmittal for Activity #: ADF43
Site Description: Monsanto Queeny

FROM: Andrea Jirka Robert Greenall for AJ.
Chief, Laboratory Branch, ENSV

TO: Dale Bates
Chief, Environmental Services Division Support Branch, ENSV

ATTN: Bob Dona

Attached is the data transmittal for the above referenced site. This should be considered a ____ Partial or X Complete data transmittal (completes transmittal of _____).
If you have any questions or comments, please contact Dee Simmons at 551-5129.

cc: Data Files

RECEIVED
9-11-91
RSD

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 91 ACTNO: A6F15 SAMNO: 001 OCC: _ MEDIA: WATER PL: DONA, B.

ACTIVITY DES: MONSANTO QUEENY
LOCATION: MW-14 PROJECT NUM: A60 REF LATITUDE: __ __ __ PT: LONGITUDE: ___ __ __

SAMPLE DES: Monsanto St. Louis
LOCATION: MW-14 2" PVC
CASE/PATCH/SMO: ____1_1_____ LAB: ___
STORET/SAF/BAS NO: ______

	DATE	TIME	FROM REF PT
BEG:	07/11/91	10:30	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
CUBI	5 ML HNO3	WM	METALS
2 VOA VIALS	ICED	WV	VOLATILES
GLASS	ICED	WS	SEMIVOLATILES
GLASS	ICED	WP	PESTICIDES
GLASS	ICED	WH	HERBICIDES
CUBI	5 ML HNO3	WM34	MERCURY BY COLD VAP
GLASS	4 C	WD02	2,3,7,8-TCDD IN WATER (PG/

COMMENTS: MW-14
Purged 11 gallons
pH-6.93.
Temp-76°F.
SC. - 1210 µs/cm.
Color - Black w/sheen
strong odor
Static H2O level / -0.98 below ground surface
2" PVC well casing
PVC dedicated PVC bailer with polypropylene cord.

SAMPLE COLLECTED BY: Geoghegan Miller Tom Lazarski
Jacobs Engineering Steve Fireman

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 91 ACTNO: 43 SAMNO: 002 RCC: _ MEDIA: WATER PL: DONA, S.

ACTIVITY DET: MONSANTO QUEENY
LOCATION: TW-1 PROJECT NUM: 360 PT: REF LATITUDE: __ __ __
LONGITUDE: ___ __ __

SAMPLE DESC: Monsanto St. Louis
LOCATION: TW-1 8" Steel
CASE/MATCH/SAS: ____/_/____ LAB: ___
STORET/SAMPLE NO: ____

DATE TIME FROM REF PT
BEG: 05/15/91 12:10 EAST: ____
END: 06/04/__ __:__ NORTH: ____
DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME	
CUBI	5 ML HNO3	WM	METALS	
2 VOA VIALS	ICED	WV	VOLATILES	
GLASS	ICED	WS	SEMIVOLATILES	
GLASS	ICED	WP	PESTICIDES	
GLASS	ICED	WH	HERBICIDES	
CUBI	5 ML HNO3	WM34	MERCURY	BY COLD VAP
GLASS	4 C	WCO2	2,3,7,8-TCDD IN WATER (PG/	

COMMENTS:

TW-1
Purged ~350 gallons
pH - 6.75
Temp - 75.8
S.C. - 2550
Color - clear
Some odor
Stat. H2O Level - 18.20 or 16.05 below ground surface
2" x 3' Teflon bailer with poly propylene cord
Casing 8" steel. w/ .020 slot S.S. Screen.

SAMPLE COLLECTED BY: George Hyatt Miller Jan Tunnicliff
Jacobs Engineering Steve Freeman

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 91 ACTID: ~~ADF~~ 2/3 SAMNO: 004 QCC: _ MEDIA: WATER PL: DON4, B.

ACTIVITY DES: MONSANTO PLUSENY
LOCATION: QS-1 PROJECT NUM: A6C REF LATITUDE: __ __ __
PT: LONGITUDE: ___ __ __

SAMPLE DES: Monsanto St. Louis
LOCATION:
CASE/ ATCH/ ENC: ____1_1_____ LAB: ___
STORET/SAROAD NO: _____

DATE TIME FROM REF PT
BEG: ~~02~~/~~04~~/91 __:__ EAST: ____
END: __/__/__ __:__ NORTH: ____
DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME	
CUBI	5 ML HNO3	.WM	.METALS	
2 VOA VIALS	ICED	.WV	.VOLATILES	
GLASS	ICED	.WS	.SEMIVOLATILES	
GLASS	ICED	.WP	.PESTICIDES	
GLASS	ICED	.WH	.HERBICIDES	
CUBI	5 ML HNO3	.WM84	.MERCURY	BY COLD VAP
GLASS	4 C	.WDD2	.2,3,7,8-TCDD IN WATER (PG/	

COMMENTS:

QS-1
Purged - ~250 gallons one well Volume 58 gallons
. PH - 8.06.
. Temp - 67.1°
. S.C. - 3730.
. Color - Grey
Static H_2O - 13.1 To Casing t.p

SAMPLE COLLECTED BY : ~~Geraghty & Miller~~ Tom Tannich
Jacobs Engineering Steve Freeman

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 91 ACTNO: ADP15 SAMNO: 005 DCC: _ MEDIA: WATER PL: DONA, B.

ACTIVITY DES: MONSANTO QUEENY
LOCATION: _____ PROJECT NUM: A60 REF LATITUDE: __ __ __
PT: LONGITUDE: ___ __ __

SAMPLE DES: K
LOCATION: HW-1B
CASE/BATCH/SNC: _____/_/_____ LAB: ___
STORET/SAROAD NO: _____

	DATE	TIME	FROM REF PT
BEG:	6/5 ~~5/11~~/91	14:30	EAST: ____
END:	6_15_91	15:20	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME	
CUBI	5 ML HNO3	WM	METALS	
2 VOA VIALS	ICED	WV	VOLATILES	
GLASS	ICED	WS	SEMIVOLATILES	
GLASS	ICED	WP	PESTICIDES	
GLASS	ICED	WH	HERBICIDES	
CUBI	5 ML HNO3	WM34	MERCURY	BY COLD VAP
GLASS	- 0	WD02	2,3,7,8-TCDD IN WATER (PG/	

COMMENTS:

STATIC WATER LEVEL 18.72' BELOW TOP OF RISER
TOTAL DEPTH 79.67 ' " "
HEIGHTH OF WATER COLUMN 60.95
1 WELL VOLUME = 39.62 GALLONS

WATER QUALITY PARAMS

WV	PH	TEMP	COND
0	7.88	68.7	1953
1	7.26	66.5	2020
2	6.80	65.4	2010
3	6.73	66.1	2030
4	6.60	67.4	1980

WATER IS SLIGHTLY TURBID - COLOR GRAY

SAMPLE COLLECTED BY : Klaus J Doerfler

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 91 ACTION: SUPF SAMNO: 006 QCC: _ MEDIA: WATER PL: DONA, B.

ACTIVITY DES: MONSANTO ~~LEENY~~
LOCATION: _____ PROJECT NUM: A60 REF LATITUDE: __ __ __
PT: LONGITUDE: ___ __ __

SAMPLE DES: VW-2B
LOCATION: _____
CASE/BATCH/SMO: _____/_/_____ LAB: ___
STORET/SAMPLE NO: _____

	DATE	TIME	FROM REF PT
BEG:	~~03/11/~~91 6/6	9:00	EAST: ____
END:	6/6/91	9:30	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME	
CUBI	5 ML HNO3	WM	METALS	
3 VOA VIALS	ICED	WV	VOLATILES	
GLASS	ICED	WS	SEMIVOLATILES	
GLASS	ICED	WP	PESTICIDES	
GLASS	ICED	WH	HERBICIDES	
CUBI	5 ML HNO3	WM34	MERCURY	BY COLD VAP
GLASS	4 C	W002	2,3,7,8-TCDD IN WATER (PG/	

COMMENTS:

STATIC WATER LEVEL 16.49
1 WELL VOLUME 39 GALLONS
WATER QUALITY PARAMS 160 GALLONS PURGED

WV	PH	TEMP	COND
0	6.33	65.5	7761
1	6.12	63.7	2270
2	6.27	63.6	2260
3	6.41	63.7	2150

WATER SLIGHTLY TURB - COLOR GRAY

SAMPLE COLLECTED BY : Klaus J Oeder

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 91 ACTIVITY: ~~HSF~~ 43 SAMPLE: 007 SCC: _ MEDIA: WATER PL: DONA, S.

ACTIVITY DESC: TENSANTO CLEENY
LOCATION: _____ REF LATITUDE: __ __ __
PROJECT NUM: A6C PT: LONGITUDE: ___ __ __

SAMPLE DES: MW-8A
LOCATION: _____
CASE/BATCH/SYS: _____/_/_____ LAB: ___
STORET/SAROAD ID: _____

	DATE	TIME	FROM REF PT
BEG:	6/7/91	9:15	EAST: ____
END:	6/7/91	9:45	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	AGP	NAME	
COOL	5 ML HNO3	*NM	*METALS	
3 VOA VIALS	ICED	*NV	*VOLATILES	
GLASS	ICED	*NS	*SEMIVOLATILES	
GLASS	ICED	*NP	*PESTICIDES	
GLASS	ICED	*NH	*HERBICIDES	
CUBI	5 ML HNO3	*NM34	*MERCURY	BY COLD VAP
GLASS	4 C	*NDD2	*2,3,7,8-TCDD IN WATER (PG/	

COMMENTS:

STATIC WATER LEVEL 41.40'
TOTAL DEPTH 48.25'
HEIGHT WATER COLUMN 28.85
1 WELL VOLUME 4.6 z
TOTALS GALLONS PURGED ≈ 15.0

WATER QUALITY PARAMS

WV	PH	TEMP	COND
0	5.75	70.8	4150
1	6.05	70.0	4260
2	6.51	70.1	4560
3	6.37	70.5	4670

SAMPLE COLLECTED BY : Kevin J Oberle

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 91 ACTID: A0F18 SAMNO: 008 SDG: F MEDIA: WATER PL: DONA, B.

ACTIVITY DES: MONSANTO QUEENY
LOCATION: _____ PROJECT NUM: A60 REF LATITUDE: __ __ __
PT: LONGITUDE: ___ __ __

SAMPLE DES: MW-8A RINS
LOCATION: _____
CASE/BATCH/SMO: _____/_/_____ LAB: ___
STREET/SAMPLE NO: _____

DATE TIME FROM REF PT
BEG: 6/7/91 8:20 EAST: ____
END: 6/7/91 8:20 NORTH: ____
DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
CUBI	5 ML HNO3	WM	METALS + Hg (WM34)
2 VOA VIALS	ICED	WV	VOLATILES
~~GLASS~~	~~ICED~~	~~WS~~	~~SEMIVOLATILES~~
~~GLASS~~	~~ICED~~	~~WP~~	~~PESTICIDES~~
~~GLASS~~	~~ICED~~	WH	HERBICIDES
CUBI	5 ML HNO3	WM34	MERCURY BY COLD VAP
~~GLASS~~	~~ICED~~	~~WDU2~~	~~2,3,7,8-TCDD IN WATER (PG/~~

COMMENTS:

RINSATE TAKEN OFF OF TEFLON
BAILER USED AT MW-8A AFTER DECON.

SAMPLE COLLECTED BY : Klaus J. Oeeth

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 91 ACTVTY: 60F45 SAMNO: 009 QCC: F MEDIA: WATER PL: DONA, S.

ACTIVITY DES: MONSANTO CLEENY
LOCATION: Field Blank PROJECT NUM: A60 REF LATITUDE: -- -- --
PT: LONGITUDE: --- -- --

SAMPLE DES: Monsanto - St Louis
LOCATION:
CASE/BATCH/SDG: /
STORET/GARGOD NO:

LAB: ---

	DATE	TIME	FROM REF PT
BEG:	06/11/91	17:10	EAST: ----
END:	--/--/--	--:--	NORTH: ----
			DOWN: ----

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2 VOA VIALS	ICED	WV	VOLATILES

COMMENTS:
Packaged on 06/4/91 after the sample A0F400Z

SAMPLE COLLECTED BY : Steve Jensen

DRAFT

900P

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. ~~25 FUNSTON RD~~ KANSAS CITY, KS 66115

PE Sample

FY: 91 ACTNO: 20F~~17~~ 43 SAMNO: ~~005~~ QCC: F MEDIA: WATER FL: DONA, B.

ACTIVITY DESC: MONSANTO QUEENY
LOCATION: USEAA (QQC19) PROJECT NUM: 460 REF LATITUDE: __ __ __
FT: LONGITUDE: __ __ __

SAMPLE DESC: Monsanto St. Louis
LOCATION: ______________

CASE/BATCH/SMO: _____/_/______ LAB: ___

STORET/SAROAD NO: ______

	DATE	TIME	FROM REF PT	
BEG:	06/~~21~~/91	12:30	EAST:	____
END:	__/__/__	__:__	NORTH:	____
			DOWN:	____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
CUBI	5 ML HNO3	WM	METALS +Hg (WM34)
2 VOA VIALS	ICED	WV	VOLATILES
GLASS	ICED	WS	SEMIVOLATILES
~~GLASS~~	~~ICED~~	~~WP~~	~~PESTICIDES~~
~~GLASS~~	~~ICED~~	~~WH~~	~~HERBICIDES~~
~~CUBI~~	~~5 ML HNO3~~	~~WM34~~	~~MERCURY~~ BY COLD VAP
~~GLASS~~	~~ICED~~	~~WOC2~~	~~2,3,7,8-TCDD IN WATER (26/~~

COMMENTS: Prepared by ESAT

Sample was in fact a PE sample NOT blank! Analyst will report data under 900P.

PE= WS 378 #10 Concent. true values 2 1/2 x

*Notified C. Appleby for organics 6/25/91 10:50 Am.

SAMPLE COLLECTED BY : Steve Eilleman

RL 6/7/91

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

ACTIVITY LEADER(Print)	NAME OF SURVEY OR ACTIVITY	DATE OF COLLECTION (DAY / MONTH / YEAR)	SHEET
Steve Freeman	Monsanto - J. F. Queeny		1 of 1

CONTENTS OF SHIPMENT

SAMPLE NUMBER	1-liter CUBITAINER	80 oz BOTTLE	BOTTLE	BOTTLE	VOA SET (2 VIALS EA)	water	soil	sediment	dust	other	RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
	NUMBERS OF CONTAINERS PER SAMPLE NUMBER										
ADF43001	2	4			1	X					
ADF43002	2	4			1	X					
~~ADF43003F~~	~~1~~	~~1~~			~~1~~	X					RR PE Sample 6/25/91
ADF43009F					1	X					
ADF43004	2	4			1	X					

DESCRIPTION OF SHIPMENT	MODE OF SHIPMENT
____ PIECE(S) CONSISTING OF ____ BOX(ES)	____ COMMERCIAL CARRIER: ____
3 ICE CHEST(S); OTHER ____	____ COURIER
	X SAMPLER CONVEYED ____ (SHIPPING DOCUMENT NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (SAMPLER)	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
Steve Freeman — X SEALED / UNSEALED ☐	6/6/91	10:55	Nicole Roblez 6/6/91 10:55 — X SEALED / UNSEALED ☐	Analysis
RELINQUISHED BY — ☐ SEALED / UNSEALED ☐	DATE	TIME	RECEIVED BY — ☐ SEALED / UNSEALED ☐	REASON FOR CHANGE OF CUSTODY
RELINQUISHED BY — ☐ SEALED / UNSEALED ☐	DATE	TIME	RECEIVED BY — ☐ SEALED / UNSEALED ☐	REASON FOR CHANGE OF CUSTODY

VM 6/12/91

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

ACTIVITY LEADER(Print)	NAME OF SURVEY OR ACTIVITY	DATE OF COLLECTION (DAY / MONTH / YEAR)	SHEET
Hugh J. Dooden	Monsanto-J.F. Quarry	07 / 06 / 91	1 of 1

CONTENTS OF SHIPMENT

SAMPLE NUMBER	TYPE OF CONTAINERS: 1-Liter CUBITAINER	80oz BOTTLE	BOTTLE	BOTTLE	VOA SET (2 VIALS EA)	SAMPLED MEDIA: water	soil	sediment	dust	other	RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
	NUMBERS OF CONTAINERS PER SAMPLE NUMBER										
ADF43005	2	4			1	X					
ADF43006	2	4			1	X					
ADF43007	2	4			1	X					
ADF43008	1				1	X					
	VM										

DESCRIPTION OF SHIPMENT

___ PIECE(S) CONSISTING OF ___ BOX(ES)

3 ICE CHEST(S); OTHER ___

MODE OF SHIPMENT

___ COMMERCIAL CARRIER: ___

X COURIER

___ SAMPLER CONVEYED (SHIPPING DOCUMENT NUMBER) ___

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (SAMPLER)	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
Steve Trueman ☐ SEALED ☐ UNSEALED X	6/10/91	9:40	Nicole Roberts 6/10/91 9:40 ☐ SEALED ☐ UNSEALED X	Analysis
RELINQUISHED BY X ☐ SEALED ☐ UNSEALED	DATE	TIME	RECEIVED BY ☐ SEALED ☐ UNSEALED	REASON FOR CHANGE OF CUSTODY
RELINQUISHED BY ☐ SEALED ☐ UNSEALED	DATE	TIME	RECEIVED BY ☐ SEALED ☐ UNSEALED	REASON FOR CHANGE OF CUSTODY

7-EPA-9262(Revised 5/85)

ENVIRONMENTAL SERVICES ASSISTANCE TEAM -- ZONE II

ICF Technology Incorporated

NSI Technology Services Inc.

The Bionetics Corp.

ESAT Region VII
NSI Tech.Service Inc.
25 Funston Road
Kansas City, KS 66115
(913) 551-5000

To: Mike Thomas
Chief, Analytical Services Section, LABO/ENSV

Through: Harold Brown, Ph.D.
Deputy Project Officer for Region VII ESAT, EPA

From: Kevin Ludwikoski
Scientist, ESAT

Through: Ron Ross
Region VII ESAT Team Leader

Date: 6/27/91

Subject: Case narrative and assignment completion.

Report:.....Monsanto-Queeny
TID # :.....7B-9103-530
ICF Acct. #:.....302-26-530-01
METI Sales Order:.....1073-530
EPA Activity #:.....ADF43
ESAT Document Control #:.....ESAT-VII-530-0014

ESAT was assigned eight water samples for Total Metals and Mercury analysis from Monsanto-Queeny. The samples for Mercury analysis were digested and analyzed using SOP No. 3121.14 A. The Total Metals samples were digested according to SOP No. 3110.1A and analyzed on ICAP using Method 6010.

Calibrations

All initial and continuing calibrations met Region VII guidelines for Total Metals and Mercury.

Matrix Spike / Matrix Spike Duplicate

The recoveries for Total Metals and Mercury in the matrix spike and matrix spike duplicate met Region VII guidelines.

Method Standard

The method standard recoveries for Total Metals and Mercury met Region VII guidelines.

Laboratory Duplicates

The spike duplicate precision for Total Metals and Mercury met Region VII guidelines.

Blanks

The method blank showed no Mercury above the detection limit. The method blank for Total Metals showed no analytes of interest above the detection limit with the exception of Al (73 µg/l). Since the concentration of Al in the samples was much higher than was found in the blank (except for sample ADF43008F), the data may be deemed acceptable for use. The samples were not blank corrected.

PE Sample

All analytes that were present in the PE Sample were found at acceptable levels with the possible exception of Hg (69% recovery). Since no control limits had been set for this sample, and all other QC was within Region VII guidelines, this data may be deemed acceptable for use.

Discussion

Sample ADF43003F was mistakenly labeled as a field blank when in fact it was a PE Sample prepared at the laboratory from WS 378 #10 at a 2.5X concentration. The sample has been relabeled ADF43900P and the associated true values may be found on the data sheets.

Selenium in samples ADF43001 and ADF43002 were verified by GFAA.

No problems were encountered with this project and this data may deemed acceptable for use for its intended purpose.

Conclusion

This assignment is now complete and data sheets for the analysis are attached. If you have any questions or comments, please contact me at 236-3881.

ENVIRONMENTAL SERVICES ASSISTANCE TEAM -- ZONE II

ICF Technology Incorporated

NSI Technology Services Corporation

The Bionetics Corp.

ESAT Region VII
NSI Tech. Services Corp
25 Funston Road
Kansas City, KS 66115
(913) 236-3881

TO: Robert Greenall
ORGN Section Chief

THRU: Harold Brown, Ph.D.
ESAT DPO

FROM: Roberta Vogel RV
ESAT Scientist

THRU: Ron Ross
ESAT Team Leader

DATE: July 3, 1991

SUBJECT: ADF43, Monsanto, Herbicides

TID.....07-9103-531
ICF ACCOUNT #.....26-531-01
MANTECH SALES ORDER #.....1073-531
ESAT DOCUMENT CONTROL #...ESAT-VII-531-0021
EPA ACTIVITY #.....ADF43

ESAT was tasked to analyze seven water samples from the Monsanto site for 2,4-D and Silvex. No target analytes were detected in these samples above the detection limit.

HOLDING TIME

The samples were extracted by the established holding time for herbicides in water.

INITIAL AND CONTINUING CALIBRATIONS

Five standard concentrations were used to establish linearity for 2,4-D and Silvex. Evaluation of the percent relative standard deviation of the calibration factors for these standards from their respective means revealed that both were less than 10%.

In addition two three point calibrations were run during the analysis with check calibrations using the middle level standard midway between calibrations. The % differences for all of the check calibrations were less than 25%.

QUANTITATION

Peak heights from the DB5 column were used for quantitation. Quantitation was performed using the mean calibration factor from the nearest calibration for each analyte.

METHOD BLANK

No target analytes were detected in the method blank.

QC SPIKES

A method standard and performance evaluation sample were analyzed. In the method standard 2,4-D and Silvex were recovered at 123 and 83% respectively. In the performance evaluation sample 2,4-D and Silvex were recovered at 85 and 62% respectively. There are no established guidelines for recovery of herbicide spikes.

RESULTS AND DISCUSSION

One confirmed positive hit for Silvex was found in sample 004. However, the quantitations differed by 1000% between columns, so the result was reported as a non-detect at the lower level detected, as directed in the organic analysis SOP. The data has been entered into last.

ENVIRONMENTAL SERVICES ASSISTANCE TEAM -- ZONE II

ICF Technology Incorporated

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The Bionetics Corp.

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Kansas City, KS 66115
(913) 236-3881

TO: Robert Greenall
ORGN Section Chief

THRU: Harold Brown, Ph.D.
ESAT DPO

FROM: Roberta Vogel
ESAT Scientist

THRU: Ron Ross
ESAT Team Leader

DATE: July 8, 1991

SUBJECT: ADF43, Monsanto, Herbicides

TID.....07-9103-531
ICF ACCOUNT #.....26-531-01
MANTECH SALES ORDER #.....1073-531
ESAT DOCUMENT CONTROL #...ESAT-VII-531-0021
EPA ACTIVITY #.....ADF43

This is an amendment to the original ADF43 report dated 7/3/91. In the original report, data regarding the analysis for 2,4,5-T was not included. It has been added to the LAST report and to the data package. 2,4,5-T was not detected in any of the samples and was recovered at 96% in the matrix spike. The LAST data is attached.

ENVIRONMENTAL SERVICES ASSISTANCE TEAM -- ZONE II

ICF Technology, Inc.

NSI Technology Serveces Corp.

The Bionetics Corp.

ESAT Region VII
NSI Technology Services
25 Funston Road
Kansas City, KS 66115
(913) 236-3881

To: Robert Greenall
Chief, ORGN, LABO, EPA Region VII

From: Janet K. Muse JM
Senior Scientist, ESAT

Thru: Ronald A. Ross RAR for RAR
Region VII ESAT Team Leader

Thru: Harold Brown, Ph.D.
Deputy Project Officer, Region VII ESAT, EPA

Date: July 3, 1991

Subject: Case Narrative and Data Review Document, **Monsanto**

TID #: 07-9103-531
ICF Acct. #: 302-26-531-01
NSI Sales Order : 1073-531
EPA Activity #: **ADF43**
ESAT Document Control #: ESAT-VII-531-0018

Seven water samples were received by ESAT for BNA analysis.

GC/MS Performance

All Region VII GC/MS performance criteria were met for a 50 nanogram injection of DFTPP.

Method Blanks

Bis(2-ethylhexyl)phthalate was present in the method blank at 3.1 ug/L. Positive hits for this compound were only reported positive in the samples after the blank rule was applied. That is, positive hits for bis(2-ethylhexyl)phthalate in the samples were reported and coded with a "U" unless they were greater than 10-times the level in the method blank.

Initial Calibration

All compounds met the 0.05 criteria for response factors. All compounds were less than 30% for RSD in the initial calibration.

Continuing Calibration

4-nitroaniline was less than the 0.05 criteria limit for response factors in the continuing calibration of 6/25/91. 4-nitroaniline was invalidated in all the samples analyzed on that day.

A few compounds were outside the 35% difference for response factors in the continuing calibrations. The only positive hit requiring data qualification was 4,6-dinitro-2-methylphenol in ADF43003F. 4,6-dinitro-2-methylphenol was J-coded due to this calibration outlier.

Surrogate Recoveries

Recoveries for surrogates were within the established Region VII guidelines, except for 2-fluorobiphenyl in all the samples. 2-fluorophenol was the only acid surrogate outside criteria limits in ADF43002. No data was qualified. Most of the surrogates were diluted out of ADF43001, -001S, and -001W.

Matrix Spike / Matrix Spike Duplicate

A matrix spike and matrix spike duplicate were analyzed for ADF43001. Due to matrix effects in sample ADF43001, the MS/MSD had to be diluted 1:10. Because of this, most of the spiked compounds were diluted out. No data was qualified.

Summary

From the evaluation of the QC mentioned above, this data meets the requirements for acceptability.

This analysis is now complete. Data sheets are attached. If you have any questions concerning this analysis, contact me.

ICF Technology Incorporated
NSI Technology Services Corporation

EPA Region VII Laboratory
NSI Tech. Services Corp.
25 Funston Rd.
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(913) 236-3881

To: Robert Greenall
Chief, ORGN, LABO, Region VII EPA

From: Laleh A. Jonooby
Senior Scientist, ESAT

Paula Woodland
Chemist, ESAT

Thru: Ronald A. Ross
Region VII ESAT Team Leader

Thru: Harold Brown, Ph.D.
Deputy Project Officer, Region VII ESAT, EPA

Date: June 27, 1991

Subject: Case Narrative and Data Review Document, **MONSANTO**

TID #: 7B-9103-531
ICF Acct. #: 302-26-531-01
NSI Sales Order : 1073-531
EPA Activity #: **ADF43**
ESAT Document Control #:.. ESAT-VII-531-0017

Nine water samples were received by ESAT for the analysis of volatile organic compounds.

Samples arrived in the lab with headspace.

Holding Time

The 14 day holding time for all volatile compounds were met for all of the water samples except for the dilution of sample ADF43-007 (1:100). Chorobenzene in that sample was J-coded.

GC/MS performance

All Region VII GC/MS performance criteria were met for a 50 nanogram injection of 4-bromofluorobenzene.

Method Blank

A volatile method blank was analyzed each day samples were run. Positive hits for target compounds in the blanks were only reported positive in the sample after the blank rule was applied. That is, positive hits for 2-butanone in the samples were reported and coded with a "U" unless they were greater than 10-times the level in the daily blank. A 5-times rule was applied for the other analytes.

Initial Calibration

Two initial calibrations, 20 - 200 ug/L were analyzed for this activity. The relative percent difference limit of 30% for response factors was met for all analytes in the initial calibration of 6/11/91 with the exception of methylene chloride which was outside of the 30% criteria limit. Methylene chloride in sample -001 was J-coded. Only four analytes were outside the criteria limits in the second initial calibration. No data was qualified by the second initial calibration.

Continuing Calibration

The criteria limits for response factor of 0.30 and the percent difference of 35% between response factors were met for all analytes present in the samples in all of the continuing calibrations with the exception of methylene chloride being outside the criteria limits in the continuing calibration of 6/13. However, methylene chloride was already J-coded due to the initial calibration.

Surrogate Recovery

Surrogate recoveries in the samples and blanks were within the established control limits for this analysis with the exception of sample -007 in which all three surrogate recoveries were outside the criteria limits. Toluene, ethylbenzene and total xylenes were J-coded in sample -007.

Matrix Spike/Matrix Spike Duplicate

A matrix spike and a matrix spike duplicate were analyzed for sample ADF43-004. Spike recoveries were within normal limits for all of the analytes except for 4-methyl-2-pentanone and 2-hexanone which had high recoveries in both of the MS and MSD. This is probably due to contamination within the purge and trap system from previous analyses since neither of the two compounds were present in any of the samples. No data was qualified by the MS/MSD.

Discussion

Samples arrived in the lab with headspace. The affect of this would be to bias all data low and non-detect data is suspect.

003F was marked wrong actually J 900 CPEsam

Chloroform was J-coded in ADF43-003F, due to the quantitation being outside the calibration range.
Small quantities of chlorobenzene were found in sample -006 below the method detection limits.

Library searches of all of the water samples were performed. See the attached data sheets.

Summary

From the evaluation of the QC mentioned above, this data meets the requirements for acceptability.

This analysis is now complete with data sheets attached. If you have any questions please feel free to contact us.

ENVIRONMENTAL SERVICES ASSISTANCE TEAM -- ZONE II

ICF Technology Incorporated

NSI Technology Services Corp.

The Bionetics Corp.

ESAT Region VII
NSI Technology Services
25 Funston Road
Kansas City, KS 66115
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TO: Robert Greenall
Chief, ORGN, LABO/ENSV

FROM: Louis Tollackson LT
ESAT

THRU: Ron Ross
Region VII ESAT Team Leader, NSI-TSC-ES

THRU: Harold Brown, Ph.D.
Deputy Project Officer for Region VII ESAT, EPA

DATE: July 29, 1991

SUBJECT: Case Narrative - Monsanto

TID # 07-9103-531
ICF Acct. #: 26-531-01
NSI #: 1073-531
EPA Activity #: ADF43
ESAT Document Control #:.....ESAT-VII-531-0023

Six water samples, ADF43001-002, and ADF43004-007 were recieved by ESAT on 6/12/91 for pesticide analysis. The samples were extracted on 6/17/91. The sample extracts were initially analyzed by GLC on 7/7/91. Evaluation of the data determined that the analysis did not meet QC criteria due to column and detector contamination from a previous activity. The instrument was cleaned, and the sample extracts were reanalyzed on 7/10-11/91. The analysis results gave an unconfirmed indication for aldrin which may have been due to dimethlypthalate contamination. Because of low DCB recoveries, samples ADF30002, ADF30004, and ADF30005 were reextracted on 7/18/91 and analyzed by GLC on 7/22/91. The results were negative for pesticides and PCB's.

Holding Time

The water sample was extracted within the seven day holding time established for water.

Calibration and Continuing Calibration

Quantitation was done by a three point calibration and results were found by linear regression analysis adjusted for dilution, final volume, amount of sample injected, and volume of sample extracted. Continuing calibration was checked by analyzing a mid level standard every five sample injections. The D% range for these standards was from 1% - 20% for all analytes of interest. The continuing calibration meets Region VII Guidelines. Continuing calibration for the reextracts was 1 - 9 %D which is within Region VII Guidelines for continuing calibrations.

Method Blank

A method blank was analyzed and contained no analytes of interest for this analysis.

Method Standard

A method standard was analyzed for this analysis. G-BHC: 95% recovery, Heptachlor: 58% recovery, Dieldrin: 82% recovery, Endrin: 90% recovery, and DDT: 90% recovery from the matrix spike. These values are within Region VII Guidelines for matrix spike recoveries for water. Due to the possibility of dimethylpthalate contamination of either reagent or glassware, the aldrin recovery could not be calculated. Method standard data is not used to qualify sample results. A method standard was also analyzed for the reextracts and yielded the following results: G-BHC: 56% recovery, Heptachlor: 56% recovery, Dieldrin: 71% recovery, Endrin: 65%. Aldrin was not calculated due to the presence of an interferent.

Performance Standard

A performance standard was analyzed. The recoveries for the extraction were: Heptachlor - 117%, Aldrin - 71%, Dieldrin - 132%, DDD - 100%. These values are within Region VII Guidelines for matrix spike recoveries.

Matrix Spike

A matrix spike was analyzed with the reextracted water samples. The recovery results are G-BHC - 66%, Heptachlor - 80%, Dieldrin - 70% and Endrin - 74%.

Surrogate Recoveries

DCB (Decachlorobiphenyl) was the surrogate added to the sample

extracts. The DCB recoveries varied with this analysis. The recoveries ranged from 14% to 104%. Samples ADF43002, ADF43004, and ADF43005 yielded 13% to 19% DCB recoveries. The recoveries for all other samples were within Region VII Guidelines. Explanations for these low recoveries including leaky equipment, or overheating of sample extract during sample concentration and solvent exchange. Samples ADF43002, ADF43004, and ADF439005 were reextracted on 7/18/91. The range of DCB recoveries for these reextracts were 94% - 111%. The recoveries are within Region VII Guidelines for DCB recoveries.

Results and Discussion

Six water samples were analyzed for pesticides. The combined results were negative for pesticides (See data sheets). Three samples exhibited DCB recoveries lower than normal. They were reextracted and rthe analysis results werwe negative. The samples also contained an unconfirmed aldrin like compound which may be dimethylpthalate a reagent or glassware contaminate. The analysis is now complete. If you have any questions, please contact ESAT.

ENVIRONMENTAL SERVICES ASSISTANCE TEAM – ZONE II

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NSI Technology Services Corp.

The Bionetics Corp.

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To: Robert Greenall
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From: Kirit H Bhatt KHB.
Senior Organic Analytical Chemist, ESAT

Thru: Ronald A. Ross
Region VII ESAT Team Leader

Thru: Harold Brown, Ph.D.
Deputy Project Officer, Region VII ESAT, EPA

Date: July 30, 1991

Subject: Case Narrative and Data Review Document, **Monsanto**

TID #: 07-9103-531
ICF Acct. #: 302-26-531-01
NSI Sales Order : 1073-531
EPA Activity #: **ADF43**
ESAT Document Control #: ESAT-VII-531-0027

ESAT was assigned to extract and analyse six water samples and one field blank for 2,3,7,8-TCDD, by HRGC-HRMS. The analysis of matrix spikes ADF43900G and ADF43901G could not be concluded due to an electronic fault of the HRMS.

Holding Times

The seven day holding time from sampling to extraction and the 40 day holding time from extraction to analysis were met for all water samples.

GC/MS Performance

HRGC-HRMS performance was accertained by analysing a continuous calibration standard, which met the specified responce factor requirement with respect to the initial calibration.

Method Blanks

The method blank ADF43900M was analysed twice during the analysis of the activity. Both analysis showed prescence of low concentration
of 2,3,7,8-TCDD.Blank solvent injections were carried out before analysing the method and field blanks. No peaks were detected. Consequently, the blank rule(5xsignal for the analyte)was applied. The final tabulated results are attached.

Initial Calibration
Inital calibration of 2,3,7,8-TCDD was linear,with mean RF of 1.29.

Continuous Calibration
Continuous calibration was within the range of the initial calibration, (RF=1.28).

Surrogate Recoveries
Recoveries for surrogates ranged between 104% - 116%. No limits for these recoveries are specified in the EPA protocol.

Matrix Spike/Duplicate Spike
Matrix spikes were extracted but not analysed due to the electronic fault of the HRMS.

Performance Evaluation
No performance evaluation sample was analyzed with this activity.

Summary
From the evaluation of the QC mentioned above, this data meets the requirements for acceptability.

This analysis is now complete. Please contact me if there are any querries about this activity.

The HRGC-HRMS analysis was jointley carried out by myself and Shaher Mohshin(EPA).

SM

QUALITY CONTROL EXCEPTIONS/EXPLANATIONS

1) The following samples have been J-Coded for the reasons given:

Sample No.	Parameter(s)	Reason
ADF43-007	Toluene, ethylbenz, xylenes ~~chlor~~	Surrogates were outside criteria limits
-001	chlorobenzene	H. Time passed
-001	CH_2Cl_2	cont in cont. cal
-003F *	~~Chlorobenzene~~	Outside calibration range

2) The following quality control exceptions are included in this data package.

* 003F sample marked in error actually P.E. sample (900P) ds

TENTATIVELY IDENTIFIED COMPOUNDS

TITLE: MONSANTO
LAB:
ANALYST/ENTRY: LAJ AJ
REVIEW LEVEL: 2

MATRIX: WATER
METHOD: 5241D00
REVIEWER: AJ for JM
DATA FILE: LJ2

UNITS: UG/L
CASE:
DATE: 06/27/9

SAMPLE NO.	COMPOUND NAME	FRACTION	EST. CONCENTRATION
ADF43007			
	ALKANE	VOA	6 J
	SUBSTITUTED BENZENE	VOA	12 J
ADF43008F			
	UNKNOWN	VOA	85 J

* THIS IS A CRUDE ESTIMATION BASED ON RESPONSE RELATIVE TO AN INTERNAL STANDARD. AN AUTHENTIC STANDARD HAS NOT BEEN RUN.

** THE COMPOUNDS WERE IDENTIFIED USING A LIBRARY SEARCH ROUTINE. AUTHENTIC STANDARDS HAVE NOT BEEN ANALYZED TO VERIFY COMPOUND MASS SPECTRA AND RETENTION TIMES.